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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,364	12/20/2001	Francis J. Kub	N.C. 79,684	3513
26384	7590	10/03/2003	EXAMINER	
NAVAL RESEARCH LABORATORY ASSOCIATE COUNSEL (PATENTS) CODE 1008.2 4555 OVERLOOK AVENUE, S.W. WASHINGTON, DC 20375-5320			FOONG, SUK SAN	
			ART UNIT	PAPER NUMBER
			2823	
DATE MAILED: 10/03/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/022,364

Applicant(s)

KUB ET AL.

Examiner

Suk-San Foong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Objections***

2. Claims 5 and 14 are objected to because of the following informalities: in line 2, respectively, it appears “steam” should be replaced by--stream--. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. Claims 1-4, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Henley et al. (‘567) as previously applied.

Henley et al. is relied on for the teachings discussed in the rejections of paragraph 6 of the Office Action mailed on 11/21/02.

***Claim Rejections - 35 USC § 103***

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henley et al. ('567) as applied to claims 1-4, 7 and 9 above, and further in view of Kub et al. ('108) as previously applied.

Henley et al. does not teach directing nitrogen gas stream or liquid stream at the side of the substrate.

Henley et al. does not teach implanting boron.

Kub et al.'s prior art is relied on for the teachings discussed in the rejections of paragraph 9 of the Office Action mailed on 11/21/02 as providing motivation to enable the step of splitting silicon wafer 2100 of Henley et al. to be performed.

In regard to claim 8, the recited etch stop layer would be obtained as the same materials are being treated the same as the instant invention (see instant page 6, line 3); as previously stated in paragraph 9 of the Office Action mailed on 11/21/02.

6. Claims 10-16, 18-19 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henley et al. ('567) as applied to claims 1-4, 7 and 9 above, and further in view of Lutzen et al. ('169), Kub et al. ('108) and Lee et al. ('6,312,567) as previously applied.

Henley et al. does not disclose the steps are recited in claim 10, lines 2-8.

Lutzen et al. is relied on for the teachings discussed in the rejections of paragraph 10 of the Office Action mailed on 11/21/02 as providing motivation to enable formation of protective

layer 2A and 2B of Lutzen et al in the process of Henley et al. and enable further advantage of preventing incompatible materials from diffusing out via the necessary connecting paths thus making it possible to prevent negative mutual influences between the elements in the various element layers during production process or in operation (Paragraph [0029]).

Lutzen et al. is relied on for the teachings discussed in the rejections of paragraph 10 of the Office Action mailed on 11/21/02 as providing motivation to enable the formation of thin film 2101 of Henley et al. to be performed.

In regard to claim 14, Henley et al. does not teach directing nitrogen gas stream or liquid stream at the side of the substrate.

Kub et al.'s prior art is relied on for the teachings discussed in the rejections of paragraph 10 of the Office Action mailed on 11/21/02 as providing motivation to enable the step of splitting silicon wafer 2100 of the Henley et al. to be performed.

With respect to claim 17, the combination process does not disclose that the protective layer is comprised of MgO.

Lee et al. is relied on for the teachings discussed in the rejections of paragraph 10 of the Office Action mailed on 11/21/02 as providing motivation to enable the formation of dielectric layer 2A of Henley to be performed.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henley et al. ('567) as applied to claims 1-4, 7 and 9 above and further in view of Lutzen et al. ('169), Kub et al. ('108) and Lee et al. ('6,312,567) as applied to claims 10-16, 18-19 and 21-25 above, and further in view of Srikrishnan ('987) as previously applied.

The combination process does not teach the step as recited in claim 20.

Srikrishnan is relied on for the teachings discussed in the rejections of paragraph 11 of the Office Action mailed on 11/21/02 as providing motivation to enable the step of annealing thin film 2101 of the combination to be performed and obtain further advantage of promoting a stronger bonding between substrate 530 and device layer 510' (Srikrishnan, Col. 5, lines 46-50).

### ***Response to Arguments***

8. Applicant argues that the instant disclosure indicates a goal or recognized advantage which differs from a goal or recognized advantage of Henley et al. However, it is not necessary for the reference to disclose that the process of the reference is performed to achieve the same goals as applicant or to obtain the same advantages recognized by applicant. It is sufficient that the process suggested by the reference alone or in combination with the remaining references is encompassed by the instant claims.

9. Although the claims are read in light of the specification, the limitations of the specification are not read in the claims (see MPEP 2111).

10. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the

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applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Motivation has been provided in the Office Action mailed on 11/21/02.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suk-San Foong whose telephone number is 703-305-0383. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers for the


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organization where this application or proceeding is assigned are 703-308-7722 (7724, 3431, 3432).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
September 26, 2003

  
George Fourson  
Primary Examiner  
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